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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,326	03/09/2004	Damodaran Vasudevan	CE10618R	2113
22917	7590	10/19/2006	EXAMINER	
MOTOROLA, INC. 1303 EAST ALGONQUIN ROAD IL01/3RD SCHAUMBURG, IL 60196			SOBUTKA, PHILIP	
			ART UNIT	PAPER NUMBER
			2618	

DATE MAILED: 10/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/796,326	<b>Applicant(s)</b> VASUDEVAN ET AL.	
	<b>Examiner</b> Philip J. Sobutka	<b>Art Unit</b> 2618	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 August 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,7-9,13-17,21-23 and 27-29 is/are rejected.
- 7) ☒ Claim(s) 4-6,10-12,18-20 and 24-26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3,7-9,13,14 are rejected under 35 U.S.C. 102(b) as being anticipated by Haumont et al (US 20020032032)

Consider claim 1. Haumont teaches a method for controlling a cell reselection mode of a mobile station while the mobile station resides in a cell comprising:

determining a cell reselection mode of the mobile station (*Haumont teaches determining if a service cell should be reselected in paragraphs 5-7*) wherein the cell reselection mode comprises one or more of (i) whether a cell reselection will be autonomous or network-controlled and (ii) the reporting requirements of the mobile station (*Haumont teaches that the cell reselection can be mobile controlled, i.e. autonomous, or network controlled, as shown in paragraphs 20, 27,28 and 29, which also results in changed measurement requirements for the mobile, as shown in paragraph 28, 29*);

determining whether the mobile station is experiencing a change in radio frequency (RF) conditions (*Haumont teaches determining RF conditions in paragraphs 5-7, and 21-22*) ; and

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when the mobile station is experiencing a change in RF conditions, instructing the mobile station to change a cell reselection mode used by the mobile station (*Haumont teaches that the cell reselection is triggered based on the measured conditions in paragraphs 5-6. Note that a mobile changing from a mode of operating in the current cell to reselecting another serving cell would be changing its cell reselection mode*).

As to claim 2, Haumont teaches the method of claim 1, wherein determining whether the mobile station is experiencing a change in radio frequency (RF) conditions comprises:

evaluating a downlink signal (*Haumont teaches evaluating both uplink and downlink signals as described in paragraphs 8,21,22*); and

determining whether the mobile station is experiencing a change in radio frequency (RF) conditions based on the evaluation of the downlink signal (*Note that Haumont reselects on the basis of changed conditions as described in paragraphs 5-8,21,22*).

As to claim 3, Haumont teaches the method of claim 2, wherein evaluating a downlink signal comprises:

determining a signal quality metric associated with the downlink signal (*Haumont teaches monitoring various quality metrics on the uplink and downlink associated with both serving and neighboring cell on paragraph 5*);

comparing the signal quality metric to a signal quality metric threshold (*Haumont paragraphs 8, 23,24*) ; and

determining whether the mobile station is experiencing a change in radio frequency (RF) conditions based on the comparison (*Haumont teaches determining reselection i.e. because of changed conditions, based on the results on paragraphs 5-8, 23,24*) .

As to claim 7, Haumont teaches the method of claim 2, wherein evaluating a downlink signal comprises evaluating one or more downlink signals received over an evaluation period (*Haumont teaches monitoring both serving and neighboring cell downlinks on paragraphs 5,21-23*).

As to claim 8, Haumont teaches the method of claim 1, wherein determining whether the mobile station is experiencing a change in radio frequency (RF) conditions comprises:

evaluating an uplink signal (*Haumont teaches evaluating both uplink and downlink signals as described in paragraphs 8,21,22*);; and

determining whether the mobile station is experiencing a change in radio frequency (RF) conditions based on the evaluation of the uplink signal (*Note that Haumont reselects on the basis of changed conditions as described in paragraphs 5-8,21,22*) .

As to claim 9, Haumont teaches the method of claim 8, wherein evaluating a downlink signal comprises:

determining a signal quality metric associated with the uplink signal (*Haumont teaches monitoring various quality metrics on the uplink and downlink associated with both serving and neighboring cell on paragraph 5*);

comparing the signal quality metric to a signal quality metric threshold (*Haumont paragraphs 8, 23,24*); and

determining whether the mobile station is experiencing a change in radio frequency (RF) conditions based on the comparison (*Haumont teaches determining reselection i.e. because of changed conditions, based on the results on paragraphs 5-8, 23,24*).

As to claim 13, Haumont teaches the method of claim 8, wherein evaluating an uplink signal comprises evaluating one or more uplink signals received over an evaluation period (*Haumont teaches monitoring various quality metrics on the uplink and downlink associated with both serving and neighboring cell on paragraph 5*).

As to claim 14, Haumont teaches the method of claim 1, wherein instructing the mobile station to switch a cell reselection mode used by the mobile station comprises when the evaluation of the downlink signal indicates an improvement of radio frequency (RF) conditions experienced by the mobile station (*Haumont see paragraph 13*), instructing the mobile station to lengthen a reporting period associated with a cell reselection mode used by the mobile station (*Haumont see paragraphs 13-15*).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 15-17,21-23, 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haumont.

Consider claim 15. Haumont teaches a network controller comprising:

storing a default cell reselection mode associated with a cell serviced by the network controller (*Haumont teaches a network controller shown as RNS in figure 1. Note that Haumont teaches Network reselection modes associated with cells which control the measurement reporting of all mobiles in a cell, as described in paragraphs 27-31. Haumont teaches setting a default reselection mode for all mobiles in a cell in paragraph 30*); and

the controller determining a cell reselection mode of a mobile station located in the cell (*Note that a cell reselection mode of a mobile would simply determine whether the mobile remained in its current serving cell or reselected another serving cell. Note also that Haumont teaches network control of the mobile cell reselection process paragraphs 27-31*) wherein the cell reselection mode comprises one or more of (i)

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whether a cell reselection will be autonomous or network-controlled and (ii) the reporting requirements of the mobile station (*Haumont teaches that the cell reselection can be mobile controlled, i.e. autonomous, or network controlled, as shown in paragraphs 20, 27, 28 and 29, which also results in changed measurement requirements for the mobile, as shown in paragraph 28, 29*)

determines whether the mobile station is experiencing a change in radio frequency (RF) conditions (*Haumont teaches determining if a service cell should be reselected in paragraphs 5-7*); and

when the mobile station is experiencing a change in RF conditions, instructs the mobile station to change a cell reselection mode (*Haumont teaches that the cell reselection is triggered i.e. the mobile enters the cell reselection process, based on the measured conditions in paragraphs 5-6. Note that a mobile changing from a mode of operating in the current cell to reselecting another serving cell would be changing its cell reselection mode*).

Haumont teaches a Radio Network Controller (*Haumont fig 1, RNC*), but lacks a teaching of the controller including a processor and memory for storing and executing control. Official Notice is taken that it is notoriously well known in the art to use processor and memory in radio network controllers.

Therefore it would have been obvious to one of ordinary skill in the art to modify Haumont to include a memory and processor in the radio network controller in order to store and execute the control with readily available equipment.



As to claim 16, Haumont teaches the network controller of claim 15, wherein the processor determines whether the mobile station is experiencing a change in radio frequency (RF) conditions by evaluating a downlink signal quality metric associated with a downlink signal (*Haumont teaches evaluating both uplink and downlink signals as described in paragraphs 8,21,22*) and determines whether the mobile station is experiencing a change in radio frequency (RF) conditions based on the evaluation (*Note that Haumont reselects on the basis of changed conditions as described in paragraphs 5-8,21,22*)..

As to claim 17, Haumont teaches the network controller of claim 16, wherein the processor evaluates the signal quality metric by comparing the signal quality metric to a signal quality metric threshold (*Haumont teaches monitoring various quality metrics against thresholds on the uplink and downlink associated with both serving and neighboring cell on paragraph 5, 8, 23,24*) and further determines whether the mobile station is experiencing a change in radio frequency (RF) conditions based on the comparison (*Haumont teaches determining reselection i.e. because of changed conditions, based on the results on paragraphs 5-8, 23,24*) .

As to claim 21, Haumont teaches the network controller of claim 16, wherein the processor evaluates a downlink signal quality metric by evaluating downlink signal quality metrics over an over an evaluation period (*Haumont teaches monitoring both serving and neighboring cell downlinks on paragraphs 5,21-23*).

As to claim 22, Haumont teaches the network controller of claim 15, wherein the processor determines whether the mobile station is experiencing a change in radio

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frequency (RF) conditions by evaluating an uplink signal quality metric associated with an uplink signal (*Haumont teaches evaluating both uplink and downlink signals as described in paragraphs 8,21,22*) and determines whether the mobile station is experiencing a change in radio frequency (RF) conditions based on the evaluation. (*Note that Haumont reselects on the basis of changed conditions as described in paragraphs 5-8,21,22*) .

As to claim 23, Haumont teaches the network controller of claim 22, wherein the processor evaluates the uplink signal quality metric by comparing the uplink signal quality metric to a signal quality metric threshold (*Haumont teaches monitoring various quality metrics on the uplink and downlink associated with both serving and neighboring cells against thresholds on paragraphs 5, 8,23,24*) and further determines whether the mobile station is experiencing a change in radio frequency (RF) conditions based on the comparison (*Haumont teaches determining reselection i.e. because of changed conditions, based on the results on paragraphs 5-8, 23,24*).

As to claim 27, Haumont teaches the network controller of claim 22, wherein the processor evaluates an uplink signal quality metric by evaluating uplink signal quality metrics over an evaluation period (*Haumont teaches monitoring various quality metrics on the uplink and downlink associated with both serving and neighboring cell on paragraph 5*).

As to claim 28, Haumont teaches the network controller of claim 15, wherein the processor instructs the mobile station to switch a cell reselection mode used by the mobile station comprises by, when the evaluation of the downlink signal indicates an

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improvement of radio frequency (RF) conditions experienced by the mobile station (*Haumont see paragraph 13*), instructing the mobile station to lengthen a reporting period associated a cell reselection mode used by the mobile station (*Haumont see paragraphs 13-15*).

As to claim 29, Haumont as applied to claim 15 teaches the network controller comprising a Base Station Controller (*Haumont paragraph 74*), a Packet Control Function (*Haumont teaches a packet control channel as described in paragraph 21*), and a Packet Control Unit (*Haumont, note that an SGSN (serving GPRS support node) provides control for the packet system, see figure 1*).

#### ***Allowable Subject Matter***

6. Claims 4-6, 10-12, 18-20 and 24-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Consider claim 4. The nearest prior art as shown in Haumont fails to teach the method of claim 2, wherein evaluating a downlink signal comprises: determining a signal quality metric associated with the downlink signal; determining an uplink coding scheme based the signal quality metric; and determining whether the mobile station is experiencing a change in radio frequency (RF) conditions based on the determined uplink coding scheme.

Consider claim 10. The nearest prior art as shown in Haumont fails to teach the method of claim 8, wherein evaluating an uplink signal comprises: determining a signal

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quality metric associated with the uplink signal; determining an uplink coding scheme based the signal quality metric; and determining whether the mobile station is experiencing a change in radio frequency (RF) conditions based on the determined uplink coding scheme.

Consider claim 18. The nearest prior art as shown in Haumont fails to teach the network controller of claim 16, wherein the processor evaluates the signal quality metric by determining an uplink coding scheme based the signal quality metric and further determines whether the mobile station is experiencing a change in radio frequency (RF) conditions based on the determined uplink coding scheme.

Consider claim 24. The nearest prior art as shown in Haumont fails to teach the network controller of claim 22, wherein the processor evaluates the uplink signal quality metric by determining an uplink coding scheme based on the uplink signal quality metric and further determines whether the mobile station is experiencing a change in radio frequency (RF) conditions based on the determined uplink coding scheme.

Regarding claims 5,6,11,12, 25 and 26, note that while Haumont does teach the network controlling the level of autonomy in the mobile, as described in paragraph 29, Haumont does not teach that is based on the determined RF conditions, and in fact specifically has non-performance related criteria which control the level of mobile autonomy in certain situations, as described in paragraphs 33-38.

Consider claim 5. The nearest prior art as shown in Haumont fails to teach the method of claim 2, wherein instructing the mobile station to change a cell reselection mode used by the mobile station comprises: when the evaluation of the downlink signal

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indicates a deterioration of radio frequency (RF) conditions experienced by the mobile station and the mobile station is using an autonomous cell reselection mode, instructing the mobile station to switch to a network-controlled cell reselection mode; and when the evaluation of the downlink signal indicates an improvement of radio frequency (RF) conditions experienced by the mobile station and the mobile station is using a network-controlled cell reselection mode, instructing the mobile station to switch to an autonomous cell reselection mode.

Consider claim 6. The nearest prior art as shown in Haumont fails to teach the method of claim 2, wherein changing a cell reselection mode of the mobile station comprises when the evaluation of the downlink signal indicates an improvement of radio frequency (RF) conditions experienced by the mobile station and the mobile station is using an autonomous cell reselection mode that requires reporting, instructing the mobile station to switch to an autonomous cell reselection mode that does not require reporting.

Consider claim 11. The nearest prior art as shown in Haumont fails to teach the method of claim 8, wherein changing a cell reselection mode of the mobile station comprises: when the evaluation of the uplink signal indicates a deterioration of radio frequency (RF) conditions experienced by the mobile station and the mobile station is using an autonomous cell reselection mode, instructing the mobile station to switch to a network-controlled cell reselection mode; and when the evaluation of the uplink signal indicates an improvement of radio frequency (RF) conditions experienced by the mobile

station and the mobile station is using a network-controlled cell reselection mode, instructing the mobile station to switch to an autonomous cell reselection mode.

Consider claim 12. The nearest prior art as shown in Haumont fails to teach the method of claim 8, wherein changing a cell reselection mode of the mobile station comprises when the evaluation of the uplink signal indicates an improvement of radio frequency (RF) conditions experienced by the mobile station and the mobile station is using an autonomous cell reselection mode that requires reporting, instructing the mobile station to switch to an autonomous cell reselection mode that does not require reporting.

Consider claim 19. The nearest prior art as shown in Haumont fails to teach the network controller of claim 16, wherein the processor instructs the mobile station to change a cell reselection mode used by the mobile station by, when the evaluation of the downlink signal quality metric indicates a deterioration of radio frequency (RF) conditions experienced by the mobile station and the mobile station is using an autonomous cell reselection mode, instructing the mobile station to switch to a network-controlled cell reselection mode, and when the evaluation of the downlink signal quality metric indicates an improvement of radio frequency (RF) conditions experienced by the mobile station and the mobile station is using a network-controlled cell reselection mode, instructing the mobile station to switch to an autonomous cell reselection mode.

Consider claim 20. The nearest prior art as shown in Haumont fails to teach the network controller of claim 16, wherein the processor instructs the mobile station to change a cell reselection mode used by the mobile station by when the evaluation of

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the downlink signal quality metric indicates an improvement of radio frequency (RF) conditions experienced by the mobile station and the mobile station is using an autonomous cell reselection mode that requires reporting, instructing the mobile station to switch to an autonomous cell reselection mode that does not require reporting.

Consider claim 25. The nearest prior art as shown in Haumont fails to teach the network controller of claim 22, wherein the processor instructs the mobile station to change a cell reselection mode used by the mobile station by, when the evaluation of the uplink signal quality metric indicates a deterioration of radio frequency (RF) conditions experienced by the mobile station and the mobile station is using an autonomous cell reselection mode, instructing the mobile station to switch to a network-controlled cell reselection mode, and when the evaluation of the uplink signal quality metric indicates an improvement of radio frequency (RF) conditions experienced by the mobile station and the mobile station is using a network-controlled cell reselection mode, instructing the mobile station to switch to an autonomous cell reselection mode.

Consider claim 26. The nearest prior art as shown in Haumont fails to teach the network controller of claim 22, wherein the processor instructs the mobile station to change a cell reselection mode used by the mobile station by, when the evaluation of the uplink signal quality metric indicates an improvement of radio frequency (RF) conditions experienced by the mobile station and the mobile station is using an autonomous cell reselection mode that requires reporting, instructing the mobile station to switch to an autonomous cell reselection mode that does not require reporting.

### **Response to Amendment**

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7. Applicant's arguments with respect to claims 1-3,7-9,13-17,21-23,27-29 have been considered but are moot in view of the new ground(s) of rejection.

8. Applicant alleges that Haumont fails to teach the autonomous and network controlled reselection modes, and mobile reporting requirements of the added limitations, however as has been shown in the new rejection statements above, Haumont clearly teaches the new limitations.

***Conclusion***

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.



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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip J Sobutka whose telephone number is 571-272-7887. The examiner can normally be reached on Monday - Friday, 8:30am - 5:00pm.
12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew D. Anderson can be reached on 571-272-4177.
13. The current fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

On July 15, 2005, the Central FAX Number will change to **571-273-8300**. This new Central FAX Number is the result of relocating the Central FAX server to the Office's Alexandria, Virginia campus.

Most facsimile-transmitted patent application related correspondence is required to be sent to the Central FAX Number. To give customers time to adjust to the new Central FAX Number, faxes sent to the old number (703-872-9306) will be routed to the new number until September 15, 2005.

After September 15, 2005, the old number will no longer be in service and **571-273-8300** will be the only facsimile number recognized for "centralized delivery".

**CENTRALIZED DELIVERY POLICY:** For patent related correspondence, hand carry deliveries must be made to the Customer Service Window (now located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314), and facsimile transmissions must be sent to the Central FAX number, unless an exception applies. For example, if the examiner has rejected claims in a regular U.S. patent application, and the reply to the examiner's Office action is desired to be transmitted by facsimile rather than mailed, the reply must be sent to the Central FAX Number.

14. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

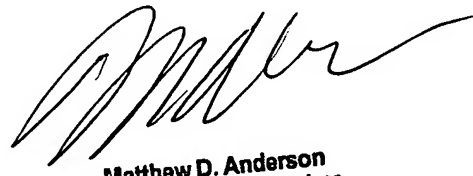
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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Philip Sobutka

(571) 272-7887



**Matthew D. Anderson**  
Supervisor Patent Examiner